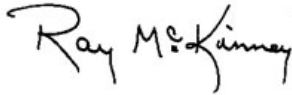


ISSUE DATE: June 12, 2006

PROGRAM INFORMATION BULLETIN NO. P06-12



FROM: RAY McKINNEY  
Administrator for  
Coal Mine Safety and Health

SUBJECT: Reissued Moratorium on Future Use of Alternative Seal Methods and Materials Pursuant to 30 CFR 75.335 and Assessment of Existing Sealed Areas in Underground Bituminous Coal Mines. This revised Program Information Bulletin Supersedes No. P06-11

**Who needs this information?**

Underground bituminous coal mine operators, miners' representatives, independent contractors, Coal Mine Safety and Health (CMS&H) enforcement and Technical Support personnel, manufacturers of seal materials, and other interested parties need this information. This Program Information Bulletin (PIB) is being reissued to extend the compliance due date until June 26, 2006, for industry to submit revised mine ventilation plans to periodically assess the mine atmosphere behind existing seals where alternative methods and materials are currently in use. The PIB provides an additional two weeks to assure sufficient time for mine operators to assess the mine methane liberation history, seam history; (i.e., spontaneous combustion potential or seam liberation potential), mine ventilation experience and a proposed sampling regime at the currently installed seals constructed using the alternative method provisions of the standard.

**What is the purpose of this PIB?**

This PIB informs the mining industry of an immediate moratorium on the future use of alternative methods or materials used to create seals or sets of seals under Title 30 Code of Federal Regulations (30 CFR) 75.335(a)(2). To avoid creating an unintentional hazard, any seals or set of seals currently under construction using such alternative methods may be completed. After construction is complete, atmospheres in these sealed areas should be assessed as noted in this PIB. The PIB also notifies coal mine operators that they are required to immediately examine the structural integrity of all existing underground alternative seals as well as revise their ventilation plans to assess the mine atmosphere behind these seals.

**Information**

MSHA officials investigating the Darby No. 1 Mine explosion on May 20, 2006, have determined that the alternative seals in use near the site of the explosion were destroyed. Earlier this year, alternative seals failed at the Sago Mine in West Virginia. While the location and precise cause or causes of these blasts are undetermined at this time, preliminary information indicates that the seals were totally destroyed by the blast. After reviewing this information and the use of these alternative methods and materials allowed in mine ventilation plans, MSHA is concerned because the failures of these seals are not preventing hazards which they were intended to prevent in underground bituminous coal mines.

This PIB announces a temporary moratorium on new construction of seals using alternative methods or materials in underground bituminous coal mines under 30 CFR 75.335(a)(2). Any alternative seal or set of seals currently under construction may be completed. Otherwise, all new seal construction is limited to the solid concrete block design specified in 30 CFR 75.335(a)(1). This PIB also directs mine operators to assess the atmospheres in existing sealed areas where alternative methods and materials are currently in use.

#### **A. Timetable for the Moratorium**

This moratorium takes effect immediately and prohibits future construction of alternative seals or sets of seals not already under construction. The temporary moratorium will remain in effect until further in-mine evaluations are completed. During the moratorium, if an in-mine evaluation performed by MSHA of the adequacy and structural integrity of alternative seal methods and materials and an assessment of the sealed atmosphere indicates that the seal is effectively performing its intended purpose, the use of the alternative method or material may resume on a mine by mine basis. Construction of seals pursuant to 75.335(a)(1) can continue in all cases.

#### **B. Timetable for Assessment of Existing Sealed Areas Where Alternative Methods and Materials are in Use**

Mine operators should also submit a revised ventilation plan to the District Manager for approval by June 26, 2006, to periodically assess the mine atmosphere behind existing seals where alternative methods and materials are currently in use. The assessment shall include mine methane liberation history, seam history; (i.e., spontaneous combustion potential or seam liberation potential), mine ventilation experience and a proposed sampling regime. The sampling regime should include a description of how sealed atmospheres will be sampled i.e. in-mine sampling, through boreholes from either the mine surface or by other means. As with all other ventilation plan provisions the proposed sampling and any necessary remediation will be evaluated on a mine by mine basis. Based on the size and orientation of the sealed area, seam and mine history,

experience with the mine and similar mines, as well as the quantitative in-mine sample results, further sampling, which may include surface boreholes, may be needed.

In addition, the plan should propose remedial actions to be taken if the atmosphere in a sealed area is found to be in the explosive range. Atmospheres found to be near the explosive range when considering barometric pressure changes and other factors, such as temperature and accumulations of water, could also require remedial action. Remedial actions could include inert gas injection or the use of water to inert the area if the mine dip and other conditions are conducive to this type of action. In some cases, resealing, grout injection or other remedial measures may be necessary to provide protective isolation of the sealed area.

If the atmosphere in a sealed area is found at the time of sampling not to be in the explosive range, no further action other than continued seal maintenance will be necessary. In addition, weekly testing of the atmosphere outby the seals is required by 30 CFR Part 75.364.

#### **What is the background for this PIB?**

The two recent and deadly mine explosions at the Sago Mine in January, 2006 and the Darby No. 1 Mine in May, 2006 show that there are problems with the use of alternative methods and materials to create seals. Properly constructed seals are crucial to containing explosions and preventing the migration of potentially explosive methane-air mixtures from worked out areas to the working areas of an underground coal mine. In both of these mine accidents, seals constructed of alternative methods and materials adjacent to the explosion areas were destroyed by the forces of the explosion. MSHA has determined that a temporary moratorium on the future building of seals using alternative methods and materials is essential to protecting against the hazards of explosive mine atmospheres. MSHA has also determined that mine operators should immediately revise their ventilation plans to sample and assess mine atmospheres where seals built with alternative methods and materials are currently in use.

#### **What is MSHA's authority for this PIB?**

The Federal Mine Safety and Health Act of 1977; 30 CFR Parts 75.335, 75.370, and 75.371.

#### **Where is this PIB on the Internet?**

This information may be viewed on the World Wide Web by accessing MSHA's home page (<http://www.msha.gov>), choosing "Compliance Info" and "Program Information Bulletins."

**Who are the MSHA contact persons for this PIB?**

Coal Mine Safety and Health

John Langton or Bill Crocco, (202) 693-9500

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[Crocco.William@dol.gov](mailto:Crocco.William@dol.gov)

**Who will receive this PIB?**

MSHA PPM Holders

Underground Bituminous Coal Operators

Miners' Representatives

Independent Contractors

Special Interest Groups

## **Approved Detectors for Methane and Other Mine Gases**

With the recent drive to periodically assess the mine atmosphere behind existing seals, it is important to use the correct equipment. Portable methane detectors are approved by MSHA through the requirements stated in 30 CFR Part 22. A list of approved detectors can be found on the MSHA web site at <http://www.msha.gov/TECHSUPP/ACC/lists/22methne.pdf>.

Portable methane detectors can be approved in multiple configurations. For example, they may include the ability to detect other gases, such as oxygen and carbon monoxide. Additionally, they also may be approved with a sampling pump. These sampling pumps can be an integral part of the detector or a separate attachment.

MSHA tests sampling pumps to ensure that they are intrinsically safe and to ensure that the combination of the pump and detector give accurate results in the mining environment.

Typically, the MSHA approval plate located on the portable methane detector will list the available options that have been approved for use with the detector. However, if you are not sure if a certain attachment or configuration is approved, you should consult the manufacturer for guidance.